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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/275,568	03/24/1999	MICHAEL C. PITMAN	Y0998-112	9918

7590 06/10/2004

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EXAMINER

LY, CHEYNE D

ART UNIT PAPER NUMBER

1631

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/275,568

Applicant(s)

PITMAN ET AL.

Examiner

Cheyne D Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. <u>5/29/03</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. In view of the Appeal Brief filed on March 15, 2004, PROSECUTION IS HEREBY REOPENED. New grounds of rejections are set forth below.
2. The finality of the instant Office Action has been withdrawn.
3. To avoid abandonment of the application, appellant must exercise one of the following two options:
 - (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
 - (2) request reinstatement of the appeal.
4. If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).
5. Applicant's arguments presented in said Appeal Brief have been addressed below. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.
6. Claims 1 and 4-15 are examined on the merits.

PRIORITY

7. In order for the present application to receive benefit of priority for an invention to an earlier application, the earlier application (the parent or provisional application) must disclose the invention so as to be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112 regarding said invention. See *Transco Products, Inc. v.*

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Performance Contracting, Inc., 38 F.3d 551, 32 USPQ 2d 1077 (Fed. Cir. 1994). the specific claimed subject matter of the present application was not disclosed in the priority document (US 60079196). Therefore, the benefit of priority has not been granted regarding the instantly claimed invention due to the failure to disclose the instantly claimed invention in the priority document in such a manner as to comply with the requirements of the first paragraph of 35 U.S.C. §112.

SPECIFICATION

8. The disclosure is objected to because of the following informalities: The formal drawings, filed November 02, 2001, has Fig. 6; however, Fig. 6 has not been described in the Brief Description of the Drawing of the instant specification. Appropriate correction is required.

9. The abstract of the disclosure is objected to because the instant abstract is greater than 150 words. Correction is required. Applicant is required to submit a new abstract having 150 words or less on a separate sheet. See MPEP § 608.01(b).

CLAIM REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1 and 4-15 are rejected under 35 U.S.C. § 112, Second Paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. This rejection is maintained with respect to claims 1 and 4-15, as recited in the previous office action, mailed January 27, 2003.

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RESPONSE TO ARGUEMENTS

13. Applicant argues that “[c]laim 1 clearly states that it is directed to a method for generating and storing data and recites a series of steps. The reference to a data processing system is preceded by the word ‘in’ and is thus an introductory phrase that merely indicates a field of use for the claimed method.” Applicant’s argument has been fully considered and found to be unpersuasive as discussed below.

14. It is noted that the preamble recites “a data processing system” and “a method” which causes claim 1 to be vague and indefinite. The recitation of “In a data processing system” has not been construed as simply “an introductory phrase that merely indicates a field of use for the claimed method” due to the limitation of “a data processing system” being well supported by the rest of the claim. “If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is necessary to give life, meaning, and vitality’ to the claim, then the claim preamble should be construed as if in the balance of the claim.” Further, any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation. (MPEP §2111.02 [R-1]) Therefore, claim 1 is vague and indefinite because it is unclear as to whether Applicant has intended to claim a data processing system or a method for generating and storing data. Clarification of the metes and bounds of claim 1 is required. Claims 4-15 are rejected for being directly or indirectly dependent from claim 1.

NEW REJECTION

15. Claim 1 recites the limitation "the descriptor vector" in lines 8 and 10. There is insufficient antecedent basis for this limitation in the claim. It is noted that the phrase

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“descriptor vectors” is recited in line 1; however, said phrase does not provide antecedent support for a singular “descriptor vector”. Further, the “descriptor vectors” in line 1 are further described in lines 1-2 as being associated with a plurality of regions”, however, this does not provide antecedent basis that each region, for example, has a corresponding descriptor vector, as being singular.

16. Specific to claim 6, lines 6 and 9 vs. line 13; the different limitations of “F distributed statistic” and “F-distributed statistic” cause claim 6 to be vague and indefinite. Are the two limitations different or the same types of distributed statistic due to the presence vs. absence of the symbol “-: therein? Clarification of the metes and bounds of said claim is required. Claims 7-15 are rejected for being dependent from claim 6.

17. Specific to claim 8, equation for solving $f(\hat{w})$ and line 3, the lack of definitions for the variables “ \hat{w}^T ”, “ ϵ_b ” and “ ϵ_w ” causes claim 8 to be vague and indefinite because said claim is unclear as to what parameters are represented by variables “ \hat{w}^T ”, “ ϵ_b ” and “ ϵ_w ” in solving for $f(\hat{w})$. Further, line 3 recites the phrase “based upon” which causes claim 8 to be vague and indefinite because it is unclear as to what is meant by the phrase “based upon” for characterizing “C”. Clarification of the metes and bounds is required. Claim 9 is rejected for being dependent from claim 8.

18. Specific to claims 11 and 12, line 1, the term “said statistic” causes said claims to be vague and indefinite because claim 6, from which claims 11 and 12 depend, recites two types of statistics as discussed above. Therefore, the phrase “said statistic” is unclear as to which type of statistic said phrase is being directed.

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19. Specific to claim 12, beginning on line 3, the characteristic of “represents...” is cited, however, the instant claim does not define the metes and bounds of what is meant by the phrase “represents...” For example, does the phrase “fk represents the value...” mean fk is the criterion function value, a component vector, or the combination? Clarification of the metes and bounds is required. Claims 13 and 14 are rejected for being dependent from claim 12.

CLAIM REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

20. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

21. Claims 1 and 4-15 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. THIS IS A NEW MATTER REJECTION.

22. This rejection is maintained with respect to claims 1 and 4-15, as recited in the previous office action, mailed January 27, 2003.

RESPONSE TO ARGUEMENTS

23. Applicant argues that “[s]upport for the amendment does not have to be *ipsis verbis*.” It is inherent from the disclosure of the instant specification. Applicant’s arguments have been fully considered and found to be unpersuasive.

24. It is re-iterated that the written description requirement under 35 U.S.C. 112, first paragraph, is that the specification shall contain a written description of the invention, in such

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full, clear, concise, and exact terms as to enable any person skilled in the art to make and use the claimed invention. It is noted that the requirement does not require that the amendment to be “*ipsis verbis*” with the disclosure in the instant specification. However, the pointed to disclosure of the instant specification does not provide any support for the specific limitation of “based on preselected criteria”, “such that the key indexes the entry for retrieval thereof”, or “computed from a convolution with a probe”.

25. Further, Applicant’s assertion that the limitation of “preselected criteria” as being inherent from the discussion of “association criteria” (page 40) in the instant specification does not satisfy the written description required cited above. For example, the cited support discloses “the training phase is used to define the association criteria between query scoops and stored scoops, and keys...the associations.” However, the cited disclosure of the “association criteria” is different from the limitation of “preselected criteria” of the claimed invention. Therefore, the pointed to support (page 40) in the instant specification does not provide written description basis support for the limitation of “preselected criteria.”

26. Further, Applicant argues that it “is inherent in the claimed invention that the key indexes the entry for retrieval of the entry”. Why else would a key corresponding to a mapping be used?” Applicant’s argument has been fully considered and found to be not persuasive as discussed below. It is noted that the pointed to support (page 40, lines 21-26) discloses “keys and the corresponding...the associations” which is completely different from the required limitation of “key indexes the entry” in claim 1. It is acknowledged that “keys” in the database art are generally used for retrieval. However, the general disclosure of “keys” does not provide written description basis support for the limited limitation of “key indexes”. For

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example, “keys” could reasonably be construed as “primary key” or “foreign key” (Ramakrishnan, pages 28-29,) which is different from the required limitation of “key indexes” as defined by Ramakrishnan (page 57-59, §3.6.2).

REJECTION RE-ITERATED

27. Specific to claim 1, line 9, the introduction of “based on preselected criteria” is considered to be new matter because it is not disclosed in the pointed support on page 40, line 21, of the specification. Claims 4-15 are rejected for being dependent from claim 1.

28. Specific to claim 1, line 13, the introduction of “such that the key indexes the entry for retrieval thereof” is considered to be new matter because it is not disclosed in the pointed support on page 40, line 21-26, of the specification. Claims 4-15 are rejected for being dependent from claim 1.

29. Specific to claim 4, line 2, the introduction of “computed from a convolution with a probe” is considered to be new matter because the phrase has not been found in the specification, as filed.

CLAIM REJECTIONS UNDER 35 U.S.C. § 101

30. Claims 1 and 4-15 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. This rejection is maintained with respect to Claims 1 and 4-15, as recited in the previous office action, mailed January 27, 2003.

31. Claims 1 and 4-15 are rejected because said claims are directed to either a data system or method comprising steps for manipulating data without any physical alteration step, which is considered to be non-statutory subject matter. “For example, a computer process that simply calculates a mathematical algorithm that models noise is nonstatutory. However, a claimed

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process for digitally filtering noise employing the mathematical algorithm is statutory.”

(MPEP § 2106 (IV)(B)(2) (b), part ii). Similar to the nonstatutory example above, the instant invention comprises algorithmic steps for manipulating descriptor data without any physical alteration resulted from said manipulation steps.

32. It is acknowledged that the instant invention comprises steps for manipulating said data, however, said steps could reasonably be construed as processes performed by a data system and the data manipulation occurs within said system. Therefore, “such activity is not determinative of whether the process is statutory because such transformation alone does not distinguish a statutory computer process from a nonstatutory computer process” (MPEP § 2106 (IV)(B)(2) (b), part ii).

RESPONSE TO ARGUMENT

33. Applicant’s arguments have been acknowledged and found unpersuasive for the reasons discussed below.

34. Applicant cites *AT&T Corp. v. Excel Communications Inc.*, 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999) and *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) to provide further support that Congress intended not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in § 101. Federal courts have held that 35 U.S.C. 101 does have certain limits. First, the phrase “anything under the sun that is made by man” is limited by the text of 35 U.S.C. 101, meaning that one may only patent something that is a machine, manufacture, composition of matter or a process. See, e.g., *Alappat*, 33 F.3d at 1542, 31 USPQ2d at 1556; *Warmerdam*, 33 F.3d at 1358, 31 USPQ2d at 1757 (Fed. Cir. 1994). Second, 35 U.S.C. 101 requires that the subject matter

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sought to be patented be a “useful” invention. Accordingly, a complete definition of the scope of 35 U.S.C. 101, reflecting Congressional intent, is that any new and useful process, machine, manufacture or composition of matter under the sun that is made by man is the proper subject matter of a patent.

35. Specific to the citation of *AT&T Corp. v. Excel Communications Inc.*, 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999), Applicant argues that the claimed methods or processes are performed by a data processing system; and the data are expressed and processed as electrical signals operated upon by a processing apparatus. Therefore, the claimed invention has a practical and useful application. The claimed system or method is considered to be non-statutory because said system or method merely comprises steps for exchanging electrical signals without any physical alteration of said data resulted from some analysis or storage steps. Further, said system or method steps do not cause a physical transformation to said data outside of the system resulted from some analysis or storage steps.

36. Specific to Applicant’s citation of *In re Lowry*, 32 F. 3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994) to argue the instant 35 U.S.C. 101 rejection, Applicant’s argument has been fully considered and found to be unpersuasive because *In re Lowry* is not a decision regarding 35 U.S.C. 101 issues, but instead the decision in *In re Lowry* is directed to reversing a 35 U.S.C. 102 and 103 decision. It is noted that *In re Lowry* refers to the reversal of the 35 U.S.C. 101 rejection in a decision from the Board of Appeals, and provides a brief summary of said decision; however, *In re Lowry* is not directed to 35 U.S.C. 101 issues. Therefore, the citation of *In re Lowry* has been fully considered and found to be unpersuasive in overcoming the instant 35 U.S.C. 101 rejection.

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37. Specific to the citation of Arrhythmia Research Technology, Inc. v. Corazonix., 22 USPQ2d 1033 (Fed. Cir. 1992), Applicant's citation of "Arrhythmia at 1060" has not been found, because page 1060 has not been found in Arrhythmia Research Technology, Inc. v. Corazonix., 22 USPQ2d 1033 (Fed. Cir. 1992). Further, Applicant argues that the instant claimed invention is similar to the invention cited in Arrhythmia Research Technology, Inc. v. Corazonix., 22 USPQ2d 1033 (Fed. Cir. 1992) because the instant claims do not preempt all uses of any algorithms; rather they are limited to storage and retrieval in a computer memory. Applicant's argument has been fully considered and found to be unpersuasive as discussed below. The examiner not been able to ascertain the similarities between the instant invention and the invention for analyzing electrocardiograph signals cited in Arrhythmia Research Technology, Inc. v. Corazonix., 22 USPQ2d 1033 (Fed. Cir. 1992). More specifically, the instant invention lacks any outputting steps which are critical limitations of claims 1 and 7 of the cited invention in Arrhythmia Research Technology, Inc. v. Corazonix., 22 USPQ2d 1033 (Fed. Cir. 1992).

38. Further, it has been noted above that the instant claimed invention is directed to either a system or method comprising steps for manipulating data without any physical alteration step, which is considered to be non-statutory subject matter. The instant invention comprises steps for manipulating said data, and said steps could reasonably be construed as processes performed by a data system and the data manipulation occurs within said system. Therefore, "such activity is not determinative of whether the process is statutory because such transformation alone does not distinguish a statutory computer process from a nonstatutory computer process" (MPEP § 2106 (IV)(B)(2) (b), part ii).

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CLAIM REJECTIONS UNDER 35 U.S.C. § 102

39. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

40. Claims 1, 4, and 5 is rejected under 35 U.S.C. 102(a) and 102(e)(2) as being anticipated by Platt et al. (US PN 5,784,294A).

41. The specific claimed subject matter of the present application was not disclosed in the priority document US 60079196 with the filing date of March 24, 1998. Therefore, the domestic priority benefit under 35 U.S.C. §119(e) has not been granted.

RESPONSE TO ARGUMENT

42. Applicant's argument directed to the deficiency of Platt et al. has been fully considered and found to be unpersuasive as discussed below.

43. Platt et al. discloses a system and method for generating a set of attributes (entry) of a molecule derived from data representing the atomic structure of said molecule to be stored in memory (Abstract etc. and column 5, lines 11-14). For example, the IMIDAZOLE (identifier) molecule with data representing at least one region stored in memory. The data are characterized by the axis of rotation and the principal axis is determined by the weight

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distribution and shape of the tire/wheel combination (column 6, lines 1-67), as in instant claim 1, lines 1-7.

44. The method of Platt et al. is directed to first determine the attributes based on moment of inertia and charge distribution (preselected criteria) and secondly determine how the attributes map to vector descriptors that are used to compare molecules (column 5, lines 14-25 and 45-52), as in instant claim 1, lines 8-9.

45. The shape and charge descriptors of the molecule may be stored in a molecular database and retrieved therefrom (column 16, lines 4-7). It is noted the key and key indexes are inherent features of the molecular database designed for retrieval cited above, as in instant claim 1, lines 10-13.

46. The inclusion of a text reference by Ramakrishnan is not being used as prior art but only to support the inherent features of databases above that are well known in the art.

Ramakrishnan discloses that the use key and search key for index is well known in the database literature (page 72, §4.2.3, lines 1-9). Further, the key and index functions are routine features of databases in general (pages 28, 29, and 57-59).

47. The data are characterized by the axis of rotation and the principal axis is determined by the weight distribution and shape of the tire/wheel combination (column 6, lines 1-67), as in instant claim 4.

48. "The descriptors may be divided into two groups: a first group related to the inertial coordinate system defined by the inertial axes x,y,z, and a second group related to the coordinate system defined by the axes q1,q2,q3" (column 12, lines 31-36), as in instant claim 5.

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CONCLUSION

49. Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (see 37 CFR § 1.6(d)). The CM1 Fax Center number is (703) 872-9306.

50. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

51. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (571) 272-0722.

52. Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instruments Examiner, Tina Plunkett, whose telephone number is (571) 272-0549.

C. Dune Ly
6/9/04

Ardin H. Marschel
ARDIN H. MARSCHEL
PRIMARY EXAMINER
6/9/04